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Practitioner's Docket No. L 2396

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: George M. Alleman, Jr. et al.  
Application No.: 09 / 411,106 Group No.: 1725  
Filed: October 4, 1999 Examiner: Colleen P. Cooke  
For: ALL-TERRAIN UNDERCARRIAGE

Assistant Commissioner for Patents  
Washington, D.C. 20231

**TRANSMITTAL OF APPEAL BRIEF  
(PATENT APPLICATION—37 C.F.R. § 1.192)**

1. Transmitted herewith, in triplicate, is the APPEAL BRIEF in this application, with respect to the Notice of Appeal filed on October 31, 2001

NOTE: "Appellant must, within two months from the date of the notice of appeal under § 1.191 or within the time allowed for reply to the action from which the appeal was taken, if such time is later, file a brief in triplicate. . . ." 37 C.F.R. § 1.192(a) (emphasis added).

**2. STATUS OF APPLICANT**

This application is on behalf of

☒ other than a small entity.

☐ a small entity.

A statement:

☐ is attached.

☐ was already filed.

**3. FEE FOR FILING APPEAL BRIEF**

Pursuant to 37 C.F.R. § 1.17(c), the fee for filing the Appeal Brief is:

☐ small entity \$160.00

☒ other than a small entity \$320.00

Appeal Brief fee due \$ 320.00

**CERTIFICATE OF MAILING/TRANSMISSION (37 C.F.R. § 1.8(a))**

I hereby certify that this correspondence is, on the date shown below, being:

**MAILING**

☒ deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

**FACSIMILE**

☐ transmitted by facsimile to the Patent and Trademark Office.

Date: 12/31/01

Signature

Robert V. Vickers  
ROBERT V. VICKERS

(type or print name of person certifying)

#### 4. EXTENSION OF TERM

NOTE: The time periods set forth in 37 C.F.R. § 1.192(a) are subject to the provision of § 1.136 for patent applications. 37 C.F.R. § 1.191(d). See also Notice of November 5, 1985 (1060 O.G. 27).

NOTE: As the two-month period set in § 1.192(a) for filing an appeal brief is not subject to the six-month maximum period specified in 35 U.S.C. § 133, the period for filing an appeal brief may be extended up to seven months. 62 Fed. Reg. 53,131, at 53,156; 1203 O.G. 63, at 84 (Oct. 10, 1997).

The proceedings herein are for a patent application and the provisions of 37 C.F.R. § 1.136 apply.

(complete (a) or (b), as applicable)

- (a) ☐ Applicant petitions for an extension of time under 37 C.F.R. § 1.136 (fees: 37 C.F.R. § 1.17(a)(1)-(5)) for the total number of months checked below:

Extension (months)	Fee for other than small entity	Fee for small entity
<input type="checkbox"/> one month	\$ 110.00	\$ 55.00
<input type="checkbox"/> two months	\$ 380.00	\$ 190.00
<input type="checkbox"/> three months	\$ 870.00	\$ 435.00
<input type="checkbox"/> four months	\$ 1,360.00	\$ 680.00
<input type="checkbox"/> five months	\$ 1,850.00	\$ 925.00

Fee: \$ \_\_\_\_\_

If an additional extension of time is required, please consider this a petition therefor.

(check and complete the next item, if applicable)

- ☐ An extension for \_\_\_\_\_ months has already been secured, and the fee paid therefor of \$\_\_\_\_\_ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$\_\_\_\_\_

or

- (b) ☒ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

#### 5. TOTAL FEE DUE

The total fee due is:

Appeal brief fee \$ 320.00

Extension fee (if any) \$ \_\_\_\_\_

**TOTAL FEE DUE \$ 320.00**

#### 6. FEE PAYMENT

☒ Attached is a check in the sum of \$ 320.00.

☐ Charge Account No. \_\_\_\_\_ the sum of \$ \_\_\_\_\_.

A duplicate of this transmittal is attached.

## 7. FEE DEFICIENCY

**NOTE:** *If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to change the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, 1065 O.G. 31-33.*

- ☒ If any additional extension and/or fee is required, this is a request therefor and to charge Account No. 22-0347.

AND/OR

- ☒ If any additional fee for claims is required, charge  
Account No. 22-0347.

  
SIGNATURE OF PRACTITIONER

Reg. No.: 19,504

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**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of : George M. Alleman, Jr. et al  
For : ALL-TERRAIN UNDERCARRIAGE  
Serial No. : 09/411,106  
Filed : October 4, 1999  
Group Art Unit : 1725  
Examiner : Colleen P. Cooke  
Our Docket No. : L-12396

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*Shirley L. Scagg*

Dec. 31, 2001

Date of Signature

**APPEAL BRIEF**

Asst. Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

This is an Appeal from the decision of the Examiner dated July 31, 2001, finally rejecting claims 1-31 and 48-82 in the above-identified patent application. No claims are allowed.

**I. REAL PARTY IN INTEREST**

Lincoln Global, Inc. is the real party in interest as assignee of the named inventors.

**II. RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences.

**III. STATUS OF THE CLAIMS**

The above-identified patent application presently contains claims 1-31, 48-61, 71-75, and 82.

The Examiner, in the Final Office Action, rejected claims 48-61 and 73-82 under 35 U.S.C. §112,

first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Claims 62-70 and 76-81 were rejected by the Examiner under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Claims 71-73 and 82 were rejected by the Examiner under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Claims 29, 30, and 31 were rejected by the Examiner under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claims 1-18 and 22-31 were rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Karpoff et al. 5,730,891, in view of Sueshige et al. 6,129,166 and Magda 4,926,768. Claims 19-21 were rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Karpoff et al. 5,730,891, in view of Sueshige et al. 6,129,166 and Magda 4,926,768, and further in view of Momberg 4,062,430. Claims 48-50, 52, 54, 56, 57, 61, 74, and 75 were rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Karpoff et al. 5,730,891, in view of Magda 4,926,768. Claims 53, 55, and 58-60 were rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Karpoff et al. 5,730,891, in view of Magda 4,926,768, and further in view of Sueshige et al. 6,129,166.

Claims 1-31 and 48-61, 71-75, and 82 are the subject of this Appeal. Appellants have

included one set of the appealed claims in the Appendix of Claims.

#### **IV. STATUS OF AMENDMENTS**

Appellants filed the above-identified patent application on October 4, 1999, which included 61 claims. On January 29, 2001, Appellants filed an Amendment, in response to an Office Action dated January 16, 2001, which canceled claims 32-47. On June 6, 2001, Appellants filed an Amendment, in response to an Office Action dated March 27, 2001, which amended claims 2, 4, 29-31, 48-50, and 56, and added new claims 62-82. On September 13, 2001, Appellants filed an Amendment After Final, in response to a Final Office Action dated July 31, 2001, which cancelled claims 62-70 and 76-81. All amendments have been entered.

Appellants are filing concurrently herewith a proposed amendment to claims 1, 9, 10, 15, 48, 57-59, 73, 74, and 82. The amendment to the claims corrects several grammatical errors in the claims and places the claims in better form for purposes of appeal. The claims included in the Appendix of Claims reflect the requested amendments to the claims. Appellants request that the proposed amendment be entered for purposes of the present Appeal.

#### **V. SUMMARY OF THE INVENTION**

The present invention relates to an undercarriage for supporting heavy equipment such as a welder and/or power supply to enable the equipment to be more easily and conveniently moved between a variety of locations. (P. 2, lns. 2-4; Figs. 1-13). The undercarriage includes a base for supporting the welder and/or power supply, a plurality of axles and/or spindles secured to the base, at least one wheel secured to each axle and/or spindle, and a push bar. (P. 2, lns. 12-14; Figs. 1-5, 9-13). The undercarriage is designed to provide adequate clearance of the underside of the undercarriage from the ground so that the undercarriage can transverse a variety of terrains, whether

rough or smooth, when transporting the welder and/or power supply from location to location. (P. 2, lns. 14-16; Figs. 1, 2, 4, 5, 9-13). The positioning of the axles and/or spindles on the undercarriage is selected so that the center of gravity of the welder and/or power supply is located on one of the axles and/or spindles or between the two furthest spaced apart axles and/or spindles. (P. 2, lns. 16-19; Figs. 9-13). The undercarriage can be a separate component from the welder and/or power supply, or can be integrated with the parts of the welder and/or power supply. (P. 2, lns. 20-21; Figs. 1, 2, 5, 8-13).

In one embodiment, the positioning of the two furthest spaced apart axles and/or spindles along the longitudinal length of the undercarriage is selected such that the center of gravity of the welder and/or power supply is located on or between the two axles and/or spindles, or between the axes of the front and rear wheels when the undercarriage is in a non-tilted position on a generally flat ground surface. (P. 2, ln. 24 - P. 3, ln. 5; P. 14, lns. 8-24; P. 16, lns. 14-19; Figs. 9, 11; original independent claims 1, 32, 48). In another embodiment, the center of gravity of the welder and/or power supply is located between the two furthest spaced axles and/or spindles, or between the axes of the front and rear wheels when the undercarriage is positioned in the fully tilted position on a generally flat ground surface. (P. 3, lns. 5-8; P. 14, lns. 8-24; P. 16, lns. 14-19; Figs. 12-13; original independent claims 1, 32, 48).

The base of the undercarriage includes at least two axles and/or spindles spaced apart from one another to reduce the amount of force required to move the undercarriage over an obstacle on a ground surface. (P. 3, lns. 9-12). By moving the wheels close together and toward the middle of the length of the base of the undercarriage, the movement of the undercarriage over rough surfaces and over different gradients in the ground surface is simpler and requires less force. (P. 3, lns. 13-

17). Maintaining the distance of the two furthest spaced apart axles and/or spindles up to about 3 times the sum of the radii of the front wheel and the rear wheel has been found to achieve this objective. (P. 3, lns. 17-19).

In one embodiment, the diameter of the front wheels is less than the diameter of the rear wheels. (P. 4, lns 10-11; Fig. 1-5, 8, 11-13). The larger diameter rear wheel provides for easier rolling of the undercarriage over rough surfaces and reduces the force necessary for the operator to push the undercarriage, and to move the undercarriage over obstacles. (P. 4, lns 11-13). The smaller front wheel permits the axles and/or spindles of the front and rear wheels to be closer to the center of gravity and closer together, and such closeness makes it easier to move the front of the undercarriage over an obstacle. (P. 4, lns. 14-16). The ratio of the radius of the front wheel to the rear wheel is selected to enable the undercarriage to easily be maneuvered over a curb or other obstacle on a ground surface. (P. 5, ln. 26 - P. 6, ln. 1). The spacing of the front axle and/or spindle to the rear axle and/or spindle is also maintained to reduce the amount of energy needed to rotate the undercarriage on the rear axle and/or spindle, and to move the rear of the undercarriage over a curb surface or other obstacle once the front wheel has been moved onto the top of the curb surface or other obstacle. (P. 6, lns. 3-7). By positioning the front and rear axles and/or spindles close together, and further by positioning the axles and/or spindles so that the center of gravity of the welder and/or power supply is positioned between the axles and/or spindles, a fraction of the full load of the undercarriage needs to be overcome when moving over a curb surface or other obstacle. (P. 6, lns. 7-11; Figs. 12-13). The large rear wheel enables the undercarriage to traverse soft and/or rough surfaces and makes it easier to roll the undercarriage on a rough surface. (P. 6, lns. 11-13). The undercarriage can include a brake mechanism to lock at least one front and/or rear wheel in position



to prevent the undercarriage from freely rolling. (P. 6, lns. 21-23; Figs. 2, 3, 6, 7).

The push bar enables an operator to easily move the undercarriage, or welder and/or power supply from location to location. (P. 6, lns. 26-27; Figs. 1-5, 8-13). The push bar can be connected to the welder and/or power supply, or at or near the rear of the base of the undercarriage. (P. 7, lns. 1-2; Figs. 1-5, 8-13). The push bar can include a handle portion oriented to the base of the undercarriage, or welder and/or power supply at an angle between  $90^{\circ}$  -  $160^{\circ}$ . (P. 7, lns. 2-5; Figs. 1-2). Such a positioning of the handle portion increases the ease of operation when pushing and/or pulling the undercarriage, or welder and/or power supply over a ground surface, especially a rough ground surface. (P. 7, lns. 7-9). This angular extension of the push bar facilitates in the moving of the undercarriage, or welder and/or power supply when moving over a curb or other obstacle. (P. 7, lns. 9-11). The push bar can include a base section which is angularly connected to the base portion to help transmit forces between the push bar and base of the undercarriage, or welder and/or power supply to facilitate in the movement of the undercarriage, or welder and/or power supply. (P. 7, lns. 11-13; Fig. 2). A lift bar can be connected to the push bar. (P. 7, lns. 13-14; Figs. 1-3, 5, 8, 11-13). The lift bar is designed to enable an operator to easily move the rear portion of the undercarriage, or welder and/or power supply over a curb surface or other obstacle once the front wheels of the undercarriage, or welder and/or power supply have been positioned on the top surface of the curved surface or other obstacle. (P. 7, lns 18-20). The push bar can include one or more holders or hooks to enable attachment of related welding and/or power supply equipment such as wires, hoses, gloves, goggles, helmets and the like to the undercarriage, or welder and/or power supply so that both the welder and/or power supply and the parts and accessories can be simultaneously and conveniently moved. (P. 7, lns. 20-24; Figs. 1-4).

## **VI. THE ISSUES**

1. Whether claims 48-61 and 73-82 under 35 U.S.C. §112, first paragraph, contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the Appellants, at the time the application was filed, had possession of the claimed invention.

2. Whether claims 62-70 and 76-81 under 35 U.S.C. §112, first paragraph, contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the Appellants, at the time the application was filed, had possession of the claimed invention.

3. Whether claims 71-73, and 82 under 35 U.S.C. §112, first paragraph, contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the Appellants, at the time the application was filed, had possession of the claimed invention.

4. Whether claims 29, 30, and 31 under 35 U.S.C. §112, second paragraph, are indefinite for failing to particularly point out and distinctly claim the subject matter which Appellants regard as the invention.

5. Whether claims 1-18 and 22-31 under 35 U.S.C. §103(a) are unpatentable over Karpoff et al. 5,730,891, in view of Sueshige et al. 6,129,166 and Magda 4,926,768.

6. Whether claims 19-21 under 35 U.S.C. §103(a) are unpatentable over Karpoff et al. 5,730,891, in view of Sueshige et al. 6,129,166 and Magda 4,926,768, and further in view of Momberg 4,062,430.

7. Whether claims 48-50, 52, 54, 56, 57, 61, 74, and 75 under 35 U.S.C. §103(a) are

unpatentable over Karpoff et al. 5,730,891, in view of Magda 4,926,768.

8. Whether claims 53, 55, and 58-60 under 35 U.S.C. §103(a) are unpatentable over Karpoff et al. 5,730,891, in view of Magda 4,926,768, and further in view of Sueshige et al. 6,129,166.

## **VII. GROUPING OF CLAIMS**

The claims do not stand and fall together. Appellants consider the rejected claims to be separately patentable from one another.

## **VIII. PRIOR ART RELIED UPON**

A. United States Patent No. 4,062,430 (Momberg) issued December 13, 1977 - entitled "Quick Release Cord Storage Hook," Class 191, subclass 12R.

B. United States Patent No. 4,926,768 (Magda) issued May 22, 1990 - entitled "Seed Spreader," Class 111, subclass 11.

C. United States Patent No. 5,730,891 (Karpoff) issued March 24, 1998 - entitled "Undercarriage for Welder," Class 219, subclass 136.

D. United States Patent No. 6,129,166 (Sueshige) issued October 10, 2000 - entitled "Electromotive Cart," Class 180, subclass 65.6.

## **IX. DISCLOSURES OF PRIOR ART REFERENCES**

### **A. MOMBERG (4,062,430)**

Momberg discloses an improved hook for use on an electrical appliance such as an upright vacuum cleaner. (Abstract). The improved hook is a compound hook that is moveably secured to the upper part of the propelling handle of an upright vacuum cleaner, floor polisher or sander, rug

scrubber, lawn mower or other electrically operated appliance. (Col. 1, lns. 14-20). The hook is provided with two oppositely extending arms, one of which is of sufficient length and so located as to retain, when in one position, all of the turns of an electric cord looped therearound, but which will release these turns when the hook is moved to another position. (Col. 1, lns. 20-25). The other arm of the hook is shorter and so formed and positioned as to catch and retain the first turn only of the looped cord when the hook is moved to the last-mentioned position. (Col. 1, lns. 26-29).

**B. MAGDA (4,926,768)**

Magda discloses a seed spreading machine which transports, meters, and disperses different types of grass seed evenly and uniformly over a lawn. (Col. 2, lns 13-16). The seed spreader has two hopper compartments mounted on a wheeled frame assembly and interconnecting controls to dispense different types of grass seed and/or other material from the hopper compartments. (Col. 2, lns. 34-38). The seed spreader can be driven by an engine. (Col. 2, lns, 44-45). The frame assembly has a U-shaped front portion and front caster wheels. (Col. 4, lns. 24-33).

**C. KARPOFF (5,730,891)**

Karpoff discloses an undercarriage for a welding power supply which facilitates in the loading and unloading of a heavy gas cylinder onto the rear portion of the undercarriage. (Col. 1, lns. 60-65). Karpoff is presently owned by Lincoln Global, Inc., the real party in interest in this Appeal. The undercarriage includes a base for supporting the power supply a platform for supporting a large gas cylinder containing pressurized inert gas. (Col. 1, ln. 65 - Col. 2, ln. 1). The platform has a rearwardly facing end and means on the base to pivotally mount the platform for movement between a first position tilted downwardly with the rear end of the platform against the floor to load the cylinder onto the flat surface of the platform, and a second position tilted upwardly with the rear end

of the platform raised from the floor to a position that supports the cylinder onto the rear end of the base of the undercarriage. (Col. 2, lns. 4-11).

**D. SUESHIGE (6,129,166)**

Sueshige discloses an electromotive cart that includes two pairs of wheels, a load carrier base, a grip handle, a pair of batteries, a single electric motor driven by the batteries, and a direct axle driving mechanism that conveys a driving force from the electric motor to the front pair of wheels. (Col. 2, lns. 36-52). The grip handle is used to turn the cart by causing the rear wheels of the cart to be raised off the ground. (Col. 3, lns. 1-6). The front wheels are larger in diameter than the rear wheels. (Col. 3, ln. 66 - Col. 4, ln. 1).

**X. ARGUMENT**

**A. THE FIRST ISSUE**

It is respectfully submitted that the Examiner's final rejection of claims 48-61 and 73-82 under 35 U.S.C. §112, first paragraph, is in error.

Appellants submit that the claims pending in the above identified patent application are sufficiently supported by the originally filed specification and drawings in such a way as to reasonably convey to one skilled in the relevant art that Appellants, at the time the patent application was filed, had possession of the claimed invention.

The Examiner objected to an amendment to claim 48 which changed the word "axles" to "axes." The Examiner stated that, since claim 48 originally recited "axles", the amendment to "axes" constituted new matter. A similar objection was made by the Examiner concerning claim 56. The Examiner also objected to new claim 74 for including the word "axes."

The test for sufficiency of support of a claim in the specification is whether the disclosure

of the application relied upon "reasonably conveys to the artisan that the inventor had possession at the time of the later claimed subject matter." *Ralston Purina Co. v. Far-Mar-Co*, 227 USPQ 177, 179 (Fed. Cir. 1985). The PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims. *In re Gosteli*, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989).

The Examiner has not met the initial burden of presenting evidence or reasons why persons skilled in the art of undercarriages for welders and/or power supplies would not recognize in the disclosure a description of the invention defined by the claims 48, 56, and 74. Appellants, in the Amendment After Final, directed the Examiner's attention to page 16, lines 14-16 of the originally filed specification which included the following passage:

As shown in FIGURE 9, welder W is positioned on undercarriage 20 in the transport mode such that the center of gravity of the welder is positioned on or between the central **axis** of front and rear wheels 90 and 100. (emphasis added).

The specification makes reference to the term "axis." In addition, originally filed claim 32, which is a non-elected claim, states as follows:

32. A machine that is moveable over a ground surface comprising at least one front wheel rotatably interconnected to said machine, at least one rear wheel rotatably interconnected to said machine, and a push bar interconnected to said machine, said rear wheel having a radius that is equal to or greater than a radius of said front wheel, said front and rear axle positioned on said machine such that a center of gravity of said machine is positioned to lie on or between the central **axis** of said front or rear wheel, said central **axis** of said front and rear wheel spaced apart along the longitudinal axis of said machine so that the spacing is less than about 3 times the sum of the radii of said front and rear wheel. (emphasis added).

Both of these passages establish that Appellants, at the time the application was filed,

disclosed that the spacing of the front wheels from the rear wheels was dependent on the spacing of the wheel "axles" or wheel "axes." Therefore, the amendment to claims 48 and 56, and the addition of claim 74 did not constitute new matter with respect to the use of the term "axes."

The Examiner, in the October 18, 2001 Advisory Action, acknowledged that the term "axis" was included in the originally filed specification; however, the Examiner stated that "[a]lthough this portion of the specification happens to mention central axes of the front and rear wheel, it does not provide sufficient basis to overcome the rejection." Unfortunately, the Examiner did not explain why this passage in the originally filed specification would not reasonably convey to one skilled in the relevant art that Appellants, at the time the application was filed, understood the interchangeability of the terms "axles" and "axes." The Examiner's concern appears to be based on the assumption that the spacing apart of the axes of the front and rear wheels by less than about three times the sum of the front and rear wheel radii is not disclosed in the specification. However, this exact spacing, using the axes of the front and rear wheels as reference points, is disclosed in originally filed claim 32.

As a practical matter, one skilled in the art would know that the axle of a wheel is the wheel's axis of rotation. Consequently, even if Appellants had not disclosed "axes" in the original specification, which they did, the use of the term "axes" in the claims would not be new matter since one skilled in the art would know the interchangeability of the terms "axle" and "axis" when defining the location of a wheel.

It is requested that the rejection of claims 48-61 and 73-82 under 35 U.S.C. §112, first paragraph, be reversed.

## **B. THE SECOND ISSUE**

It is respectfully submitted that the Examiner's final rejection of claims 62-70 and 76-81 under 35 U.S.C. §112, first paragraph, is moot.

Appellants cancelled claims 62-70 and 76-81 in the Amendment After Final dated September 17, 2001. Consequently, the rejection of claims 62-70 and 76-81 under 35 U.S.C. §112, first paragraph, is moot.

### **C. THE THIRD ISSUE**

It is respectfully submitted that the Examiner's final rejection of claims 71-73 and 82 under 35 U.S.C. §112, first paragraph, is in error.

Appellants submit that the claims pending in the above identified patent application are sufficiently supported by the originally filed specification and drawings in such a way as to reasonably convey to one skilled in the relevant art that Appellants, at the time the patent application was filed, had possession of the claimed invention.

The Examiner objected to these claims on the basis that such claims included the limitation that the center of gravity of the welder lies on or between the axles when the welder is in both the tilted and non-tilted position. The Examiner stated that there was no basis in the original disclosure for the center of gravity being between the axles in a non-tilted position.

In the originally filed specification on page 2, line 24 to page 3, line 2, it is disclosed that the position of the wheel axles is chosen so that the center of gravity is maintained between the axles in the tilted and non-tilted position. In addition, such concept is illustrated in FIGURE 11. Furthermore, originally filed claims 1 and 48 include the limitation that the center of gravity of the welder and/or power supply lies between the axles of the front and rear wheels. Therefore, claims 1 and 48 disclose that the center of gravity of the welder and/or power supply is maintained between



the axles in the non-tilted position.

The October 18, 2001 Advisory Action did not address Appellants' arguments concerning this rejection. Appellants assume that the Examiner did not maintain this rejection in view of the Appellants' arguments in the Amendment After Final.

It is requested that the rejection of claims 71-73 and 82 under 35 U.S.C. §112, first paragraph, be reversed.

**D. THE FOURTH ISSUE**

It is respectfully submitted that the Examiner's final rejection of claims 29, 30 and 31 under 35 U.S.C. §112, second paragraph, is in error.

Appellants submit that the claims pending in the above identified patent application are definite and particularly point out and distinctly claim the subject matter which Appellants regard as the invention.

The Examiner's rejection of the claims under 35 U.S.C. §112, second paragraph, is based on the term "rearwardly rotatable."

The originally filed specification and drawings disclose an undercarriage that allows for increased maneuverability about certain obstacles. (See Figs. 9, 10, 12). The undercarriage is "rearwardly rotatable" about the rear wheels of the undercarriage by pushing down on handle 136. This downward force causes the undercarriage to rotate about the axles or axis of the rear wheels, thereby causing the front wheels to rise off the ground. Appellants submit that the recited rotation about the rear wheels relates to the ability to rotate the frame of the undercarriage about the rear wheel axles or axis. Furthermore, the specification at page 6, lines 3-7 describes the spacing of the front axle and/or spindle to the rear axle and/or spindle so as to reduce the amount of energy needed

to rotate the undercarriage on the rear axle and/or spindle, and to move the rear of the undercarriage over a curb surface or other obstacle once the front wheel has been moved onto the top of the curb surface or other obstacle. Therefore, the term "rearwardly rotatable" is not indefinite.

The October 18, 2001 Advisory Action did not address Appellants' arguments concerning this rejection. Appellants assume that the Examiner did not maintain this rejection in view of the Appellants' arguments in the Amendment After Final.

Appellants submit all the claims pending in the above-identified patent application are in proper form pursuant to 35 U.S.C. §112, second paragraph. It is requested that the rejection of claims 29, 30 and 31 under 35 U.S.C. §112, be reversed.

#### **E. THE FIFTH ISSUE**

It is respectfully submitted that the Examiner's final rejection of claims 1-18 and 22-31 under 35 U.S.C. §103(a) as being unpatentable over Karpoff et al. 5,730,891, in view of Sueshige et al. 6,129,166 and Magda 4,926,768, is in error.

First, it is respectfully submitted that Karpoff, in view of Sueshige and Magda, does not disclose, teach or suggest the moveable undercarriage that is defined in claims 1-18 and 22-31. Secondly, it is respectfully submitted that Magda is non-analogous art to the undercarriage technology; thus one skilled in the art would not take selected teachings from Magda and combine such selected teachings with Karpoff and/or Sueshige to make obvious the invention defined in claims 1-18 and 22-31.

##### **1. Reference Combination Does Not Disclose, Teach or Suggest the Claimed Invention**

Appellants submit that Karpoff, Sueshige and/or Magda do not disclose, teach, or suggest

a moveable undercarriage that satisfies all the limitations of claim 1. Appellants further submit that the limitations in dependent claims 2-4, 7-8, 11-14, 16-18, and 26-31 are also not taught, suggested, or disclosed in Karpoff, Sueshige and/or Magda.

To reject claims in an application under 35 U.S.C. §103, there must be a showing of an unrebutted prima facie case of obviousness. *In re Deuel*, 34 USPQ2d 1210, 1214 (Fed. Cir. 1995). In the absence of a proper prima facie case of obviousness, inventors who comply with the other statutory requirements are entitled to a patent. *In re Oetiker*, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

To establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the inventors. *In re Dance*, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Without such teachings, the claims pending in the above-identified patent application cannot be shown to be invalid for obviousness. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 42 USPQ2d 1378, 1383 (Fed. Cir. 1997) (absence of a suggestion to combine is dispositive of an obviousness determination).

Most, if not all, inventions arise from a combination of old elements. *In re Rouffet*, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998). Thus, every element of a claimed invention may often be found in the prior art. *Id.* Consequently, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *Id.*

The genius of invention is often a combination of known elements which in hindsight seems preordained. *McGinley v. Franklin Sports Inc.*, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001). To prevent hindsight invalidation of patent claims, the law requires some "teaching, suggestion or reason" to

combine cited references. *Gambro Lundia AB*, 42 USPQ2d at 1383. When the art in question is relatively simple, the opportunity to judge by hindsight is particularly tempting. Consequently, the tests of whether to combine references need to be applied rigorously. *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999)(guarding against falling victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher).

A critical step in analyzing the patentability of claims pursuant to 35 U.S.C. §103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. *Dembiczak*, 50 USPQ2d at 1617. The best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. *Id.*

Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight. *Interconnect Planning Corp. v. Feil*, 227 USPQ 543, 547 (Fed. Cir. 1985). Irrespective of whether express or implicit showings are relied upon to reject claims under Section 103, there must be provided particular findings related thereto. *Dembiczak*, 50 USPQ2d at 1617. Broad conclusory statements standing alone are not "evidence" of obviousness. *Id.*

Appellants submit that Karpoff discloses an undercarriage; however, such undercarriage is different from the undercarriage defined in the claims of the above-identified patent application. Appellants further submit that the combined teachings of Sueshige and Magda with Karpoff do not disclose, teach or suggest the limitations of independent claim 1 and the rejected dependent claims.

**a. Patentably Distinct Claim 1**

Claim 1 is the sole independent claim under this rejection. Claim 1 defines a moveable undercarriage for supporting and moving a welder and/or power supply over a ground surface that includes several limitations, namely 1) a base to support the welder and/or power supply, 2) a front and rear axle secured to the base, 3) two front wheels rotatably secured to the front axle, 4) two rear wheels rotatably secured to the rear axle, 5) a push bar secured to the base, 6) the rear wheels having a radius that is greater than a radius of the front wheels, 7) the base having a generally flat top surface lying in a plane generally parallel to a flat ground surface, 8) the front and rear axles positioned on the base such that a center of gravity of the welder and/or power supply lies between the axles, and 9) the front and rear axles are spaced apart along a longitudinal axis of the base at a distance of less than about 3 times the sum of the radii of the front and rear wheels.

Karpoff does not disclose, teach or suggest an undercarriage that includes a) two front wheels rotatably secured to a front axle, b) a push bar secured to a base, c) front and rear axles being positioned on the base such that the center of gravity of the welder and/or power supply lies between the axles, and d) front and rear axles being spaced apart along the longitudinal axis of the base at a distance of less than about 3 times the sum of the radii of the front and rear wheels. Irrespective of the multiple deficiencies of Karpoff, which have been acknowledged by the Examiner, the Examiner maintained that claim 1 was obvious in view of the teachings of Karpoff, Sueshige and Magda.

The Examiner asserted that Karpoff teaches that the rear axle and the front casters are spaced less than about three times the sum of the radii of the front and rear wheels. Appellants disagree. The Examiner's assertion can only be drawn from FIGURE 1 of Karpoff. Appellants have previously argued that it is improper to rely on FIGURE 1 of Karpoff to support a rejection that it

is obvious to space the front and rear axles of an undercarriage less than about 3 times the sum of the radii of the front and rear wheels. Karpoff does not include any discussion about the spacing of the rear axles from the front casters.

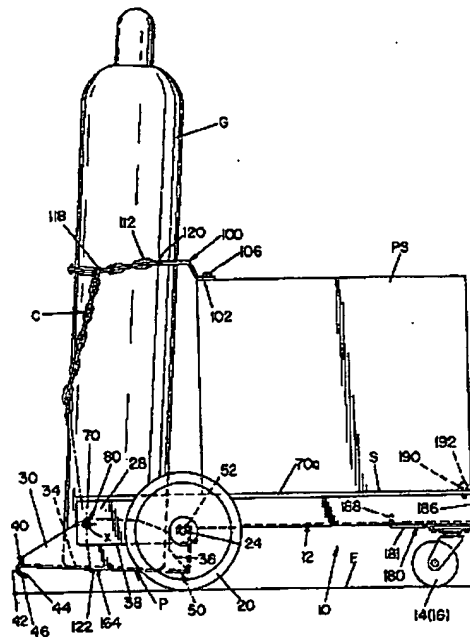
The Federal Circuit has stated that it is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue. *Hockerson-Halberstadt, Inc. v. Avia Group International*, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000) (The patent was devoid of any indication that the proportions of structures were drawn to scale.); *In re Wright*, 193 USPQ 332, 335 (CCPA 1977) (Absent any written description in the specification of quantitative values, arguments based on measurement of a drawing are of little value.); *In re Olson*, 101 USPQ 401, 402 (CCPA 1954). See also MPEP §2125 (2000).

The Examiner acknowledged Appellants' arguments in the Final Office Action; however, the Examiner stated that Karpoff was not relied upon to teach specific dimensions, proportions, or measurements, but instead was relied upon to teach the rather broad and general relation between parts of an undercarriage. Appellants disagree. The Examiner is using FIGURE 1 of Karpoff as a basis for arguing that the spacing of the rear and front axles by less than about three times the sum of the radii of the front and rear wheels is obvious in view of Karpoff. Indeed, the Examiner included a modified drawing of FIGURE 1 of Karpoff in the Advisory Action to establish that FIGURE 1 does disclose that the rear axle and the front casters of Karpoff are spaced less than about three times the sum of the radii of the front and rear wheels. The Examiner's use of FIGURE 1 is improper and further constitutes impermissible hindsight. For at least this reason, it is improper for the Examiner to use FIGURE 1 of Karpoff to support an obviousness rejection of claim 1 as it relates

to the limitation that the front and rear axles are spaced apart a distance of less than about 3 times the sum of the radii of the front and rear wheels.

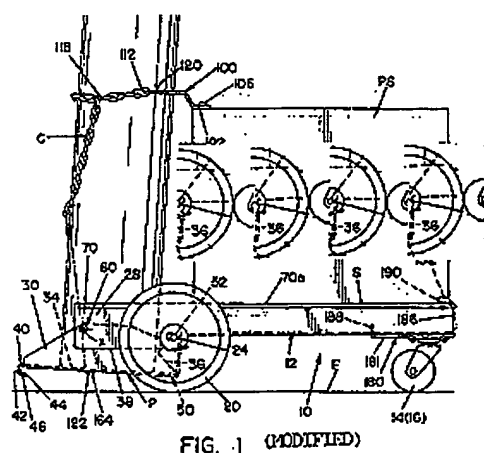
Even if the Examiner were allowed to use FIGURE 1 of Karpoff to support an obviousness rejection of such limitation, which should not be allowed, FIGURE 1 of Karpoff does not disclose that the rear axle and front casters are spaced apart a distance that is less than about 3 times the sum of the radii of the front and rear wheels. This has apparently become an issue of some contention between Appellants and the Examiner.

Unmodified FIGURE 1 of Karpoff is set forth below:

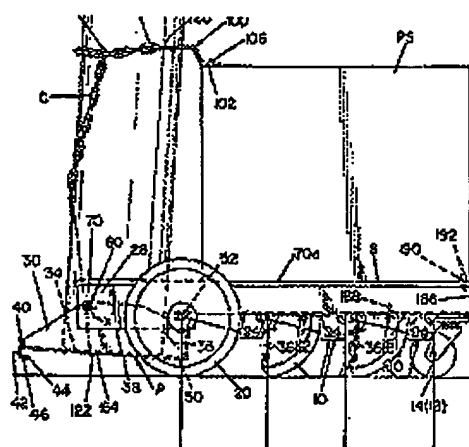


In the Amendment After Final, Appellants submitted a modified view of FIGURE 1 to illustrate that the spacing of the rear axle and the spindle of the front caster is greater than three times the sum of the radii of the rear and front wheels. The Examiner submitted in the Advisory Action a modified view of FIGURE 1 to illustrate that the spacing of the rear axle and the spindle of the front was less than three times the sum of the radii of the rear and front wheels. These two drawings are set forth below:

Appellants' Drawing



Examiner's Drawing



1 2 3

As noted above, the spacing of the three segments of the Examiner's drawing is not uniform. In an effort to resolve the apparent confusion concerning the spacing of the rear axle and front spindle shown in FIGURE 1 of Karpoff, Appellants obtained a copy of FIGURE 1 from the USPTO web site and used a metric ruler to measure the radius of each wheel and the distance between the rear axle and the front spindle. The distance between the rear axle and the front spindle was measured to be 70.75mm. The radius of the large rear wheel was measured to be 16.25mm. The radius of the small front wheel was measured to be 6.25mm. The sum of the two radii was 22.5mm.



Three times this sum was 67.5mm. Therefore, the distance between the rear axles and front spindle is **not** less than three times the sum of the radii of the rear and front wheels of the undercarriage illustrated in FIGURE 1 of Karpoff.

In view of the above analysis, the Examiner has no basis for using FIGURE 1 of Karpoff to support a rejection of any of the claims in the above-identified patent application.

As set forth above, Karpoff does not disclose, teach or suggest an undercarriage that includes a) two front wheels rotatably secured to a front axle, b) a push bar secured to a base, c) front and rear axles being positioned on the base such that the center of gravity of the welder and/or power supply lies between the axles, and d) front and rear axles being spaced apart along the longitudinal axis of the base at a distance of less than about 3 times the sum of the radii of the front and rear wheels.

Sueshige and Magda were cited by the Examiner to be combined with the teachings of Karpoff to support a rejection of claim 1. As set forth in detail below, Magda is non-analogous art, thus cannot be properly combined with Karpoff and/or Sueshige to support a rejection of any of the claims of the above-identified patent application. Furthermore, even if Magda were analogous art, which it is not, the combination of Magda with Karpoff and/or Sueshige does not make obvious claim 1 of the above-identified patent application.

The Examiner relied upon Sueshige for disclosing a cart having front and rear wheels rotatably connected to front and rear axles, handles, and front and rear axles that are spaced less than three times the sum of the radii of the front and rear wheels. Appellants submit that Sueshige does not disclose teach or suggest a) a moveable undercarriage for supporting and moving a welder and/or power supply over a ground surface, b) a base to support the welder and/or power supply, c) a base having a generally flat top surface lying in a plane generally parallel to a flat ground surface, d) rear

wheels having a radius that is greater than a radius of the front wheels, e) front and rear axles being positioned on the base such that the center of gravity of the welder and/or power supply lies between the axles, and f) front and rear axles being spaced apart along a longitudinal axis of the base at a distance of less than about 3 times the sum of the radii of the front and rear wheels.

Sueshige does not include any disclosure, teaching or suggestion that the cart can be used to support and/or move a welder. Sueshige only discloses that the cart can be used to transport melons. (Col. 1, lns. 9-25). Sueshige discloses that the rear wheels are smaller than the front wheels. This particular design is selected so as to facilitate the turning of the cart. (Col. 3, ln. 66 - Col. 4, ln. 11). Sueshige does not include any disclosure, teaching or suggestion that the base of the cart lies in a plane generally parallel to a flat ground surface. As illustrated in FIGURE 7A, the base of the cart is angled due to the different sized front and rear wheels. Sueshige also does not include any disclosure, teaching or suggestion that the front and rear axles of the cart are positioned on the base such that the center of gravity of a welder and/or power supply positioned on the base lies between the axles. Furthermore, Sueshige does not disclose, teach or suggest that the front and rear axles are spaced apart a distance of less than about 3 times the sum of the radii of the front and rear wheels. Sueshige does not include any disclosure concerning such spacing. Therefore, none can be inferred from the drawings. *Hockerson-Halberstadt, Inc.*, 55 USPQ2d at 1491; *Wright*, 193 USPQ at 335; *Olson*, 101 USPQ at 402. See also MPEP §2125 (2000).

The Examiner relied upon Magda for disclosing a cart having a push bar, rear wheels having a radius greater than the front wheels, and the rear axle and front spindle being spaced apart a distance of less than about 3 times the sum of the radii of the front and rear wheels. Appellants submit that Magda does not disclose, teach or suggest a) a moveable undercarriage for supporting

and moving a welder and/or power supply over a ground surface, b) a base to support the welder and/or power supply, c) two front wheels rotatably secured to the front axle, d) front and rear axles being positioned on the base such that the center of gravity of the welder and/or power supply lies between the axles, and e) front and rear axles being spaced apart a distance of less than about 3 times the sum of the radii of the front and rear wheels.

Magda does not include any disclosure, teaching or suggestion that the cart can be used to support and move a welder. Magda only discloses a seed spreader. Magda does not include any disclosure, teaching or suggestion that both front wheels are connected to an axle. The front wheels are disclosed as being casters. (Col. 4, lns 30-32). Magda also does not include any disclosure, teaching, or suggestion that the front and rear axles of the cart are positioned on the base such that the center of gravity of the welder and/or power supply that is positioned on the base lies between the axles of the front and rear wheels. Furthermore, Magda does not disclose, teach or suggest that the front and rear axles are spaced apart a distance of less than about 3 times the sum of the radii of the front and rear wheels. Magda does not include any disclosure on such spacing. Therefore, none can be inferred from the drawings. *Hockerson-Halberstadt, Inc.*, 55 USPQ2d at 1491; *Wright*, 193 USPQ at 335; *Olson*, 101 USPQ at 402. See also MPEP §2125 (2000).

Appellants initially submit that there is no disclosure, teaching or suggestion in Karpoff, Sueshige, and/or Magda that would motivate one skilled in the art of welding undercarriages to take selected teachings from Sueshige and/or Magda and to then modify the teachings of Karpoff to make an undercarriage defined in the claims of the above-identified patent application. The mere identification of one or more elements of a claim in a particular reference does not establish a prima facie case of obviousness. *Rouffet*, 47 USPQ2d at 1457. There must be some motivation, suggestion

or teaching of the desirability of making the specific combination. *Dance*, 48 USPQ2d at 1637. The Examiner has not identified any passages in Karpoff, Sueshige, and/or Magda that would provide such motivation to combine these references as asserted by the Examiner. Appellants submit there is none, thus a prima facie case of obvious cannot be made against any of the pending claims of the above-identified patent application. Furthermore, even if there were some motivation to combine these references, which there is not, the combination of Karpoff, Sueshige, and/or Magda does not disclose all the limitations of claim 1 as set forth above.

Appellants submit that claim 1 of the above-identified patent application is not unpatentable over Karpoff, in view of Sueshige and Magda, for at least the reasons set forth above. In addition, Appellants submit that all the claims that depend on claim 1 are not unpatentable over Karpoff, in view of Sueshige and Magda, for at least the reasons set forth above. Appellants request that such rejection be reversed.

**b. Patentably Distinct Claims 2-4, 7-8, 11-14, 16-18, and 26-31**

Claim 2 includes the limitation that the spacing between the front and rear axles is between about 1.0-1.5 times the sum of the radii of said front and rear wheels. The Examiner asserted that Karpoff discloses in FIGURE 1 that the rear axle and the front casters are spaced at about 1.5 times the sum of the radii of the front and rear wheels. As set forth above, the distance of the rear axle and the front casters disclosed in FIGURE 1 of Karpoff is over three times the sum of the radii of the front and rear wheels. Consequently, claim 2 is not obvious in view of Karpoff. The Examiner also asserted that Sueshige discloses that the front and rear axles are spaced at about 1.5 times the sum of the radii of the front and rear wheels. Sueshige does not disclose, teach or suggest such limitation as set forth above. Indeed, even if it were proper to measure the dimensions of the wheel radii and

axle distance of FIGURE 1 of Sueshige, which it is not, such measured dimensions would not disclose the limitation of claim 2. Appellants request that the rejection be reversed.

Claims 3 and 4 include the limitation that the ratio of the rear wheel radius to the front wheel radius is between 1:1 to 2.5:1. The Examiner asserted that Karpoff disclosed such limitation without any further analysis. Karpoff does not disclose, teach or suggest such limitation. Furthermore, even if it were proper to measure the dimensions of the wheel radii of FIGURE 1 of Karpoff, which it is not, such measured dimensions would not disclose the limitation of claims 3 and 4. The rear wheel is about 2.6 times larger than the front wheel. Appellants request that the rejection be reversed.

Claims 7 and 8 include the limitation that side flanges on the base of the undercarriage have a forward section positioned forwardly of the front axle and a mid-section positioned between the front and rear axle, and the flange mid-section extends downwardly a length that is greater than the downward length of the forward section of the flange. The Examiner asserted that Karpoff discloses side flanges that extend downwardly and that Karpoff teaches a front flange in a bumper assembly. Although this may be true, the Examiner does not indicate how the limitation of claims 7 and 8 concerning the flange mid-section extending downwardly a length that is greater than the downward length of the forward section of the flange is disclosed, suggested, or taught by Karpoff. Appellants request that the rejection be reversed.

Claims 11 and 12 include the limitation that the undercarriage includes a brake, and that the brake includes a brake plate secured to a brake arm, a brake arm pivotally connected to the base of the undercarriage to move the brake plate into contact and out of contact with at least one of the rear wheels, and a brake bar movable between a locked and unlocked position, wherein the brake bar in the locked position engages the brake arm to move the brake plate into contact with the rear wheel.

The Examiner asserted that Sueshige discloses a brake mechanism in column 8, lines 28-44. This brake mechanism is illustrated in FIGURE 6. The brake mechanism disclosed in Sueshige does not include a brake arm that is pivotally connected to the base of the undercarriage to move a brake plate into contact and out of contact with at least one of the rear wheels. The brake mechanism disclosed in Sueshige does not contact either rear wheel. The brake mechanism disclosed in Sueshige also does not disclose a brake bar in a locked position that engages the brake arm to move the brake plate into contact with the rear wheel. Appellants request that the rejection be reversed.

Claims 13 and 14 include the limitation that a push bar includes a base section, a middle section and a handle section, and wherein the base section is secured to the base of the undercarriage, the middle section is attached to the base section at an angle of about 15-70°, and the handle section is attached to the middle section at an angle of about 15-70°, and wherein the handle section lies in a plane generally perpendicular to the ground surface. The Examiner asserted that Sueshige disclosed a segmented bar that includes a base section, a middle section, and a handle section. The Examiner acknowledged that the orientation of the base section, the middle section, and the handle section of the push bar defined in claims 13 and 14 is not disclosed in Sueshige; however, the Examiner argued that it would have been obvious to select such angles. Such a conclusory statement is not supported by the cited art of record. If there is any teaching for such a push bar, it can only come from Appellants' own disclosure. Appellants request that the rejection be reversed.

Claims 16-18 include the limitation that a lift bar is secured to the push bar. The Examiner asserted that the push bar disclosed in Magda could be used as a lift bar. Even if this were true, the lift bar is a separate component that is connected to the push bar as defined in claims 16-18. Magda does not disclose, teach or suggest such an arrangement. Appellants request that the rejection be

reversed.

Claims 26-28 include the limitation that the side flanges on the base of the undercarriage each include at least three axle openings that are generally aligned with one another. The Examiner acknowledges that none of the cited art of record discloses side flanges having three or more openings; however, the Examiner argues that it would have been obvious to use such flanges on an undercarriage. Such a conclusory statement is not supported by the cited art of record. Once again, if there is any teaching for side flanges having at least three openings, such teaching can only have come from Appellants' own disclosure. Appellants request that the rejection be reversed.

Claims 29-31 include the limitation that the base of the undercarriage is rearwardly rotatable about the rear wheels between a fully tilted position and a non-tilted position, and that the center of gravity of the welder and/or power supply lies on or forwardly of the rear axle and rearwardly of the front axle when the base is in the fully tilted position. The Examiner asserted that Karpoff could be tilted slight enough so as to ensure that the center of gravity of the welder would fall between the rear and front axles. However, claims 29-31 require that when the base is in the fully tilted position, the center of gravity of the welder and/or power supply lies on or forwardly of the rear axle and rearwardly of the front axle. The concept of center of gravity is not disclosed in Karpoff. The concept of designing an undercarriage such that when the base is fully tilted, the center of gravity of the welder and/or power supply lies on or forwardly of the rear axle and rearwardly of the front axle is only disclosed in Appellants' patent application. Appellants request that the rejection be reversed.

For at least the reasons set forth above, dependent claims 2-4, 7-8, 11-14, 16-18, and 26-31 include one or more patentably distinct limitations.

## 2. Non-analogous Prior Art

Appellants contend that the seed spreader disclosed in Magda is non-analogous art, thus it is improper to combine the teachings of Magda with the teachings of Karpoff and/or Sueshige.

The Federal Circuit in *Deminski* stated that references which are not within the field of the inventors endeavor may be used in patentability determinations when a person of ordinary skill in the art would reasonably have consulted those references and applied their teachings in seeking a solution to the problem that the inventor was attempting to solve. *In re Deminski*, 230 USPQ 313, 315 (Fed. Cir. 1986). The combination of elements from non-analogous sources, in a manner that reconstructs an invention only with the benefit of hindsight, is insufficient to present a prima facie case of obviousness. *In re Clay*, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992). It is necessary to consider the reality of the circumstances in deciding which field a person of ordinary skill would reasonably expect to look for a solution to the problem faced by the inventor. *In re Wood*, 202 USPQ 171, 174 (CCPA 1979). In order to determine whether a reference is reasonably pertinent to the inventor's field of endeavor, one looks to, among other things, the problem confronting the inventor. *Orthopedic Equipment Co. v. United States*, 217 USPQ 193, 196 (Fed. Cir. 1983).

Karpoff, the primary reference cited by the Examiner, pertains to a welder undercarriage. Karpoff is classified in class/subclass 219/136. Although not dispositive, the classification and field of search of Karpoff does not overlap the classification and field of search of Magda, thus suggesting that one skilled in the art of undercarriages for welders or power supplies would not look for solutions in the areas identified in the search field of Magda. Magda discloses a seed spreader. Karpoff discloses an undercarriage for a welder or power supply. These two technologies have little, if any, similarities. Appellants submit that one skilled in the art of undercarriages for welder and



power supplies would not be motivated to seek solutions to problems for such undercarriages in the field of seed spreaders or any other type of spreader. The Examiner asserted that Magda is analogous art since Magda discloses a wheeled cart. Appellants disagree with such analysis.

Appellants submit that Magda is non-analogous art, thus cannot be used in combination with any other reference to support a rejection of claims 1-18 and 22-31. For at least this reason, the rejection of claims 1-18 and 22-31 for being unpatentable over Karpoff, in view of Sueshige and Magda, should be reversed.

#### **F. THE SIXTH ISSUE**

It is respectfully submitted that the Examiner's final rejection of claims 19-21 under 35 U.S.C. §103(a) as being unpatentable over Karpoff et al. 5,730,891, in view of Sueshige et al. 6,129,166 and Magda 4,926,768, and further in view of Momberg 4,062,430, is in error.

Magda and Momberg are non-analogous art to the undercarriage technology, thus one skilled in the art would not take selected teachings from Magda and/or Momberg and combine such selected teachings with Karpoff and/or Sueshige to make obvious the invention defined in claims 19-21.

Claims 19-20 include the limitation that at least one hook arrangement is secured to the push bar. The Examiner stated that Karpoff, Sueshige and Magda describe the invention that is defined in claims 1, 18, and 20. The Examiner acknowledged that Karpoff, Sueshige and Magda do not disclose a hook arrangement secured to a push bar. The Examiner then asserted that Momberg disclosed such a hook arrangement. Claim 21 includes the limitation that at least one holding compartment is secured to the push bar and to the hook arrangement. The Examiner does not comment about the obviousness of this limitation in view of the cited art of record. Appellants submit that none of the cited art of record discloses such limitation. For at least this reason, claim

21 is patentably distinct over the cited art of record.

As set forth above, Magda is non-analogous art, thus no rejection can be properly based on Magda. For at least this reason, Appellants request that the rejection be reversed. Furthermore, Momberg is not analogous art, thus Momberg also cannot be used to support a rejection of any of the pending claims.

As previously stated, Karpoff is the primary reference cited by the Examiner. Karpoff is classified in class/subclass 219/136. The classification and field of search of Karpoff does not overlap the classification and field of search of Momberg, thus suggesting that one skilled in the art of undercarriages for welders or power supplies would not look for solutions in the areas identified in the search field of Momberg. Momberg discloses an upright vacuum cleaner. Karpoff discloses an undercarriage for a welder or power supply. These two technologies have little, if any, similarities. Appellants submit that one skilled in the art of undercarriages for welders and/or power supplies would not be motivated to seek solutions to problems for such undercarriages in the field of upright vacuum cleaners or any other type of vacuum cleaner. The Examiner asserted that Momberg is analogous art since Momberg discloses a pushable, wheeled carrier. An upright vacuum cleaner is not a wheeled carrier. As such, Appellants disagree with the Examiner's analysis.

Appellants submit that Momberg is non-analogous art, thus cannot be used in combination with any other reference to support a rejection of claims 19-21. For at least the reasons set forth above, the rejection of claims 19-21 for being unpatentable over Karpoff, in view of Sueshige and Magda, and further in view of Momberg, should be reversed.

Appellants also submit that there is no disclosure, teaching or suggestion in Karpoff, Sueshige, Magda, and/or Momberg that would motivate one skilled in the art of welding

undercarriages to take selected teachings from Sueshige, Magda and/or Momberg, and to then modify the teachings of Karpoff to make an undercarriage defined in claims 19-21 of the above-identified patent application. As set forth above, the mere identification of one or more elements of a claim in a particular reference does not establish a prima facie case of obviousness. *Rouffet*, 47 USPQ2d at 1457. There must be some motivation, suggestion or teaching of the desirability of making the specific combination. *Dance*, 48 USPQ2d at 1637. The Examiner has not identified any passages in Karpoff, Sueshige, Magda and/or Momberg that would provide such motivation to combine these references as asserted by the Examiner. Appellants submit there is none, thus a prima facie case of obvious cannot be made against claims 19-21 of the above-identified patent application. For at least the reasons set forth above, the rejection of claims 19-21 for being unpatentable over Karpoff, in view of Sueshige and Magda, and further in view of Momberg, should be reversed.

#### **G. THE SEVENTH ISSUE**

It is respectfully submitted that the Examiner's final rejection of claims 48-50, 52, 54, 56, 57, 61, 74, and 75 under 35 U.S.C. §103(a) as being unpatentable over Karpoff et al. 5,730,891, in view of Magda 4,926,768, is in error.

First, it is respectfully submitted that Karpoff, in view of Magda, does not disclose, teach or suggest the moveable undercarriage that is defined in claims 48-50, 52, 54, 56, 57, 61, 74, and 75. Secondly, it is respectfully submitted that Magda is non-analogous art to the undercarriage technology, thus one skilled in the art would not take selected teachings from Magda and combine such selected teachings with Karpoff to make obvious the invention defined in claims 48-50, 52, 54, 56, 57, 61, 74, and 75.

**1. Reference Combination Does Not Disclose,  
Teach or Suggest the Claimed Invention**

Appellants submit that Karpoff and Magda do not disclose, teach or suggest a moveable undercarriage that satisfies all the limitations of independent claim 48. Appellants also submit that Karpoff and Magda do not disclose, teach or suggest a moveable undercarriage that satisfies all the limitations of independent claim 74. Appellants further submit that the limitations in dependent claims 49, 50, 52, 54, 56, 57, 61, and 75 are not taught, disclosed or suggested in Karpoff and/or Magda.

**a. Patentably Distinct Claim 48**

Claim 48 defines a moveable undercarriage for supporting and moving a welder or a power supply over a ground surface that includes the following limitations, namely 1) a base structure, 2) at least one front wheel rotatably secured to the base, 3) at least one rear wheel rotatable secured to the base, 4) a push bar secured to the base, 5) a rear wheel having a radius that is equal to or greater than the radius of the front wheel, 6) at least one front wheel and at least one rear wheel rotating about axes such that the center of gravity of the welder or power supply lies on or between the axes, and 7) axes being spaced apart along the longitudinal axis of the base so that the spacing is less than about 3 times the sum of the radii of the front and rear wheels.

Karpoff does not disclose, teach or suggest an undercarriage that includes a) a push bar secured to the base, and b) front and rear axes that are spaced apart along the longitudinal axis of the base at a distance of less than about 3 times the sum of the radii of the front and rear wheels.

The Examiner asserted that Karpoff teaches an undercarriage for a welder that has front and rear axes which are spaced apart along the longitudinal axis of the base of the undercarriage a

distance of less than about 3 times the sum of the radii of the front and rear wheels. As set forth above, the description of the invention of Karpoff does not include any teachings concerning the spacing of the axles or axes of the front and rear wheels of the undercarriage. The Examiner's assertion that Karpoff includes teachings as to the axes spacing is directed to FIGURE 1 of Karpoff. However, as set forth above, the spacing of the axes of the rear and front wheels of the undercarriage in FIGURE 1 is greater than three times the sum of the radii of the front and rear wheels. As to the push bar, the Examiner acknowledged that Karpoff does not disclose a push bar.

Magda was cited by the Examiner to overcome the deficiencies of Karpoff. Specifically, Magda was cited for disclosing a push bar on a seed spreader. However, Magda, if even combinable with Karpoff, which it is not, does not disclose, teach or suggest spacing the front and rear axes at a distance of less than about 3 times the sum of the radii of the front and rear wheels. Consequently, Karpoff in combination with Magda does not make obvious the undercarriage defined in claim 48.

Appellants also submit that there is no disclosure, teaching or suggestion in Karpoff and/or Magda that would motivate one skilled in the art of welding undercarriages to take selected teachings from Magda and to then modify the teachings of Karpoff to make an undercarriage defined in claim 48 of the above-identified patent application. As set forth above, the mere identification of one or more elements of a claim in a particular reference does not establish a prima facie case of obviousness. *Rouffet*, 47 USPQ2d at 1457. There must be some motivation, suggestion or teaching of the desirability of making the specific combination. *Dance*, 48 USPQ2d at 1637. The Examiner has not identified any passages in Karpoff and/or Magda that would provide such motivation to combine these references as asserted by the Examiner. Appellants submit there is none, thus a prima facie case of obvious cannot be made against claim 48 of the above-identified patent application.

Appellants submit that claim 48 of the above-identified patent application is not unpatentable over Karpoff, in view of Magda, for at least the reasons set forth above. In addition, Appellants submit that all the claims that depend on claim 48 are not unpatentable over Karpoff, in view of Magda, for at least the reasons set forth above. Appellants request that such rejection be reversed.

**b. Patentably Distinct Claim 74**

Claim 74 defines a moveable undercarriage for supporting and moving a welder or a power supply over a ground surface that includes the following limitations, namely 1) a base structure, 2) at least one front wheel rotatably secured to the base, 3) at least one rear wheel rotatable secured to the base, 4) a push bar secured to the base, 5) a rear wheel having a radius that is equal to or greater than a radius of the front wheel, 6) at least one front wheel and at least one rear wheel rotating about axles positioned on the base which are spaced apart along the longitudinal axis of the base so that the spacing is less than about 2 times the sum of the radii of the front and rear wheels.

Karpoff does not disclose, teach or suggest an undercarriage that includes a) a push bar secured to the base, and b) front and rear axes are spaced apart along the longitudinal axis of the base at a distance of less than about 2 times the sum of the radii of the front and rear wheels.

The Examiner asserted that Karpoff teaches an undercarriage for a welder that has front and rear axles which are spaced apart along the longitudinal axis of the base of the undercarriage a distance of less than about 2 times the sum of the radii of the front and rear wheels. As set forth above, the description of the invention of Karpoff does not include any teachings concerning the spacing of the axle rear wheel and the spindle of the front wheel of the undercarriage. The Examiner's assertion that Karpoff includes teachings as to axle spacing is directed to FIGURE 1 of Karpoff. However, as set forth above, the spacing of the axle of the rear wheel from the spindle of

the front wheel of the undercarriage in FIGURE 1 is greater than three times the sum of the radii of the front and rear wheels. As to the push bar, the Examiner acknowledged that Karpoff does not disclose a push bar.

Magda is cited by the Examiner to overcome the deficiencies of Karpoff. Magda is cited for disclosing a push bar on a seed spreader. However, Magda, if even combinable with Karpoff, which it is not, does not disclose, teach or suggest spacing the front and rear axles at a distance of less than about 2 times the sum of the radii of the front and rear wheels. Consequently, Karpoff in combination with Magda does not make obvious the undercarriage defined in claim 74.

Appellants also submit that there is no disclosure, teaching or suggestion in Karpoff and/or Magda that would motivate one skilled in the art of welding undercarriages to take selected teachings from Magda and to then modify the teachings of Karpoff to make an undercarriage defined in claim 74 of the above-identified patent application. As set forth above, the mere identification of one or more elements of a claim in a particular reference does not establish a prima facie case of obviousness. *Rouffet*, 47 USPQ2d at 1457. There must be some motivation, suggestion or teaching of the desirability of making the specific combination. *Dance*, 48 USPQ2d at 1637. The Examiner has not identified any passages in Karpoff and/or Magda that would provide such motivation to combine these references as asserted by the Examiner. Appellants submit there is none, thus a prima facie case of obvious cannot be made against claim 74 of the above-identified patent application.

Appellants submit that claim 74 of the above-identified patent application is not unpatentable over Karpoff, in view of Magda, for at least the reasons set forth above. In addition, Appellants submit that all the claims that depend on claim 74 are not unpatentable over Karpoff, in view of Magda, for at least the reasons set forth above. Appellants request that such rejection be reversed.

c. **Patentably Distinct Claims 56, 61 and 75**

Claims 56 and 75 include the limitation that the spacing between the front and rear axes or axles, respectively, is between about 1.0-1.5 times the sum of the radii of said front and rear wheels. The Examiner asserted that Karpoff discloses in FIGURE 1 that the rear axle and the front casters are spaced at about 1.5 times the sum of the radii of the front and rear wheels. As set forth above, the distance of the rear axle and the spindle of the front wheel disclosed in FIGURE 1 of Karpoff is over three times the sum of the radii of the front and rear wheels. Consequently, claims 56 and 75 are not obvious in view of Karpoff. The Examiner also asserted that Magda discloses that the front and rear axles are spaced at about 1.5 times the sum of the radii of the front and rear wheels. Magda does not disclose, teach or suggest such a limitation as set forth above. Indeed, even if it were proper to measure the dimensions of the wheel radii and axle distance of FIGURE 1 of Magda, which it is not, such measured dimensions would not disclose the limitation of claims 56 and 75. Appellants request that the rejection be reversed.

Claim 61 includes the limitation that a lift bar is secured to the push bar. The Examiner asserted that the push bar disclosed in Magda could be used as a lift bar. Even if this were true, the lift bar is a separate component that is connected to the push bar as defined in claim 61. Magda does not disclose, teach or suggest such an arrangement. Appellants request that the rejection be reversed.

2. **Non-analogous Prior Art**

Appellants contend that the seed spreader disclosed in Magda is non-analogous art, thus it is improper to combine the teachings of Magda with the teachings of Karpoff. Karpoff, the primary reference cited by the Examiner, pertains to a welder undercarriage. Magda discloses a seed spreader. Karpoff discloses an undercarriage for a welder or power supply. These two technologies



have little, if any, similarities. Appellants submit that one skilled in the art of undercarriages for welder and power supplies would not be motivated to seek solutions to problems for such undercarriages in the field of seed spreaders or any other type of spreader. The Examiner asserted that Magda is analogous art since Magda discloses a wheeled cart. Appellants disagree with such analysis.

Appellants submit that Magda is non-analogous art, thus cannot be used in combination with any other reference to support a rejection of claims 48-50, 52, 54, 56, 57, 61, 74, and 75. For at least this reason, the rejection of claims 48-50, 52, 54, 56, 57, 61, 74, and 75 for being unpatentable over Karpoff, in view of Magda, should be reversed.

#### **H. THE EIGHTH ISSUE**

It is respectfully submitted that the Examiner's final rejection of claims 53, 55, and 58-60 under 35 U.S.C. §103(a) as being unpatentable over Karpoff et al. 5,730,891, in view of Magda 4,926,768, and further in view of Sueshige et al. 6,129,166, is in error.

First, it is respectfully submitted that Karpoff, in view of Magda, and further in view of Sueshige, does not disclose, teach or suggest the moveable undercarriage that is defined in claims 58-60. Secondly, it is respectfully submitted that Magda is non-analogous art to the undercarriage technology, thus one skilled in the art would not take selected teachings from Magda and combine such selected teachings with Karpoff and/or Sueshige to make obvious the invention defined in claims 53, 55, and 58-60.

##### **1. Reference Combination Does Not Disclose, Teach or Suggest the Claimed Invention**

Appellants submit that Karpoff, Sueshige and Magda do not disclose, teach or suggest a

moveable undercarriage that satisfies all the limitations of claims 58-60.

Claim 58 includes the limitation that the undercarriage includes a brake wherein the brake includes a brake plate which is moveable into and out of contact with at least one rear wheel. The Examiner cited Sueshige in combination with Karpoff to support the rejection of claim 58. Karpoff does not disclose a brake; however, the Examiner asserted that Sueshige discloses a brake mechanism in column 8, lines 28-44. This brake mechanism is illustrated in FIGURE 6. The brake mechanism disclosed in Sueshige does not include a brake plate which is moveable into and out of contact with at least one rear wheel. The brake mechanism disclosed in Sueshige does not contact either rear wheel. Appellants request that the rejection be reversed.

Claim 59 includes the limitation that the undercarriage includes a brake wherein the brake includes a brake bar movable between a locked and unlocked position, and the brake bar causes the brake plate to move into contact with at least one rear wheel when the brake bar is moved into the locked position. The brake mechanism disclosed in Sueshige does not include a brake bar that is movable between a locked and unlocked position so as to cause the brake plate to move into contact with at least one rear wheel when the brake bar is moved into the locked position. As previously stated, the brake mechanism disclosed in Sueshige does not contact either rear wheel. The brake mechanism disclosed in Sueshige also does not disclose a brake bar in a locked position that engages the brake arm to move the brake plate into contact with the rear wheel. Appellants request that the rejection be reversed.

Claim 60 includes the limitation that the push bar includes a base section and a middle section, and that the base section is connected to the middle section at an angle of about  $15^{\circ}$  -  $90^{\circ}$ . The Examiner asserted that Sueshige discloses a segmented bar that includes a base section, a middle

section, and a handle section. The Examiner acknowledged that the orientation of the base section and the middle section is not disclosed in Sueshige; however, the Examiner argued that it would have been obvious to select such angles. Such a conclusory statement is not supported by the cited art of record. If there is any teaching for such a push bar, it can only come from Appellants' own disclosure. Appellants request that the rejection be reversed.

## **2. Non-analogous Prior Art**

Appellants contend that the seed spreader disclosed in Magda is non-analogous art, thus it is improper to combine the teachings of Magda with the teachings of Karpoff. Karpoff, the primary reference cited by the Examiner, pertains to a welder undercarriage. Magda discloses a seed spreader. Karpoff discloses an undercarriage for a welder or power supply. These two technologies have little, if any, similarities. Appellants submit that one skilled in the art of undercarriages for welder and power supplies would not be motivated to seek solutions to problems for such undercarriages in the field of seed spreaders or any other type of spreader. The Examiner asserted that Magda is analogous art since Magda discloses a wheeled cart. Appellants disagree with such analysis.

Appellants submit that Magda is non-analogous art, thus cannot be used in combination with any other reference to support a rejection of claims 53, 55, and 58-60. For at least this reason, the rejection of claims 53, 55, and 58-60 for being unpatentable over Karpoff, in view of Magda, and further in view of Sueshige, should be reversed.

## **XI. SUMMARY AND CONCLUSION**

The claims on appeal pertain to an undercarriage for use with a power supply and/or an arc welder. The prior art references of Karpoff, Sueshige, Magda, and/or Momberg do not disclose,

teach or suggest the claimed undercarriage.

Appellants respectfully request that the rejections to the pending claims be withdrawn and the claims be indicated as allowable.

Respectfully submitted,

VICKERS, DANIELS & YOUNG

By

A handwritten signature in black ink, appearing to read 'R. V. Vickers', written over a horizontal line.

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**APPENDIX OF CLAIMS**  
**Claims on Appeal**

1. A moveable undercarriage for supporting and moving a welder and/or power supply over a ground surface comprising a base to support the welder and/or power supply, a front and rear axle secured to said base, two front wheels rotatably secured to said front axle, two rear wheels rotatably secured to said rear axle, and a push bar secured to said base, said rear wheels having a  
5 radius that is greater than a radius of said front wheels, said base having a generally flat top surface lying in a plane generally parallel to a flat ground surface, said front and rear axles positioned on said base such that a center of gravity of the welder and/or power supply lies between said axles, said front and rear axle spaced apart along a longitudinal axis of said base at a distance less than about 3 times the sum of the radii of said front and rear wheels.
2. The undercarriage as defined in claim 1, wherein the spacing between said front and rear axles is between about 1.0-1.5 times the sum of the radii of said front and rear wheels.
3. The undercarriage as defined in claim 1, wherein the ratio of said rear wheel radius to said front wheel radius is between 1:1 to 2.5:1.
4. The undercarriage as defined in claim 2, wherein the ratio of said rear wheel radius to said front wheel radius is between 1:1 to 2.5:1.
5. The undercarriage as defined in claim 1, wherein said base includes two side edges

and side flanges connected thereto and extending downwardly therefrom, at least one axle secured to said side flanges.

6. The undercarriage as defined in claim 4, wherein said base includes two side edges and side flanges connected thereto and extending downwardly therefrom, at least one axle secured to said side flanges.

7. The undercarriage as defined in claim 5, wherein said side flanges having a forward section positioned forwardly of said front axle and a mid-section positioned between said front and rear axle, said flange mid-section extending downwardly a length that is greater than the downward length of said forward section.

8. The undercarriage as defined in claim 6, wherein said side flanges having a forward section positioned forwardly of said front axle and a mid-section positioned between said front and rear axle, said flange mid-section extending downwardly a length that is greater than the downward length of said forward section.

9. The undercarriage as defined in claim 1, wherein said front wheels are positioned rearwardly of a front edge of said base and said rear wheels are positioned forwardly of a rear edge of said base.

10. The undercarriage as defined in claim 8, wherein said front wheels are positioned

rearwardly of a front edge of said base and said rear wheels are positioned forwardly of a rear edge of said base.

11. The undercarriage as defined in claim 1, including a brake, said brake including a brake plate secured to a brake arm, a brake arm pivotally connected to said base to move said brake plate into contact and out of contact with at least one of said rear wheels, and a brake bar movable between a locked and unlocked position, said brake bar in said locked position engaging said brake  
5 arm to move said brake plate into contact with said rear wheel.

12. The undercarriage as defined in claim 10, including a brake, said brake including a brake plate secured to a brake arm, a brake arm pivotally connected to said base to move said brake plate into contact and out of contact with at least one of said rear wheels, and a brake bar movable between a locked and unlocked position, said brake bar in said locked position engaging said brake  
5 arm to move said brake plate into contact with said rear wheel.

13. The undercarriage as defined in claim 1, wherein said push bar including a base section, a middle section and a handle section, said base section secured to said base, said middle section attached to said base section at an angle of about 15-70°, said handle section attached to said middle section at an angle of about 15-70°, said handle section lying in a plane generally  
5 perpendicular to said ground surface.

14. The undercarriage as defined in claim 12, wherein said push bar including a base

section, a middle section and a handle section, said base section secured to said base, said middle section attached to said base section at an angle of about 15-70°, said handle section attached to said middle section at an angle of about 15-70°, said handle section lying in a plane generally perpendicular to said ground surface.

15. The undercarriage as defined in claim 14, wherein said base section lies in a plane that is non-parallel to said top surface of said base.

16. The undercarriage as defined in claim 1, including a lift bar secured to said push bar.

17. The undercarriage as defined in claim 4, including a lift bar secured to said push bar.

18. The undercarriage as defined in claim 15, including a lift bar secured to said push bar.

19. The undercarriage as defined in claim 1, including at least one hook arrangement secured to said push bar.

20. The undercarriage as defined in claim 18, including at least one hook arrangement secured to said push bar.

21. The undercarriage as defined in claim 20, including at least one holding compartment secured to said push bar and said hook arrangement.



22. The undercarriage as defined in claim 1, including a bumper flange secured to the front edge of said base.

23. The undercarriage as defined in claim 21, including a bumper flange secured to the front edge of said base.

24. The undercarriage as defined in claim 1, wherein said base having a length and a width at least equal to a length and a width of the welder and/or power supply.

25. The undercarriage as defined in claim 23, wherein said base having a length and a width at least equal to a length and a width of the welder.

26. The undercarriage as defined in claim 5, wherein said side flanges each including at least three axle openings being generally aligned with one another.

27. The undercarriage as defined in claim 6, wherein said side flanges each including at least three axle openings being generally aligned with one another.

28. The undercarriage as defined in claim 25, wherein said side flanges each including at least three axle openings being generally aligned with one another.

29. The undercarriage as defined in claim 1, wherein said base is rearwardly rotatable

about said rear wheels between a fully tilted position and a non-tilted position, said center of gravity of said welder and/or power supply lying on or forwardly of said rear axle and rearwardly of said front axle when said base is in said fully tilted position.

30. The undercarriage as defined in claim 4, wherein said base is rearwardly rotatable about said rear wheels between a fully tilted position and a non-tilted position, said center of gravity of said welder and/or power supply lying on or forwardly of said rear axle and rearwardly of said front axle when said base is in said fully tilted position.

31. The undercarriage as defined in claim 28, wherein said base is rearwardly rotatable about said rear wheels between a fully tilted position and a non-tilted position, said center of gravity of said welder and/or power supply lying on or forwardly of said rear axle and rearwardly of said front axle when said base is in said fully tilted position.

48. A moveable undercarriage for supporting and moving a welder or a power supply over a ground surface comprising a base structure, at least one front wheel rotatably secured to said base, at least one rear wheel rotatable secured to said base, and a push bar secured to said base, said rear wheel having a radius that is equal to or greater than a radius of said front wheel, said at least one front wheel and said at least one rear wheel rotating about axes such that a center of gravity of the welder or power supply lies on or between said axes, said axes being spaced apart along the longitudinal axis of said base so that the spacing is less than about 3 times the sum of the radii of said front and rear wheels.

49. The undercarriage as defined in claim 48, wherein said welder or power supply is positioned in said base.

50. The undercarriage as defined in claim 49, wherein said welder or power supply is secured to said base.

52. The undercarriage as defined in claim 48, including at least one axle secured to said base, said rear wheel rotatably secured to said axle.

53. The undercarriage as defined in claim 48, including at least one axle secured to said base, said front wheel rotatably secured to said axle.

54. The undercarriage as defined in claim 48, including at least one spindle secured to said base, said rear wheel rotatably secured to said spindle.

55. The undercarriage as defined in claim 48, including at least one spindle secured to said base, said front wheel rotatably secured to said spindle.

56. The undercarriage as defined in claim 48, wherein the spacing between said axes of said front and rear wheels is between about 1.0-1.5 times the sum of the radii of said front and rear wheels.

57. The undercarriage as defined in claim 48, wherein said at least one front wheel positioned rearwardly of a front edge of said base and said at least one rear wheel positioned forwardly of a rear edge of said base.

58. The undercarriage as defined in claim 48, including a brake, said brake including a brake plate which is moveable into and out of contact with said at least one rear wheel.

59. The undercarriage as defined in claim 58, including a brake bar movable between a locked and unlocked position, said brake bar causing said brake plate to move into contact with said at least one rear wheel when said brake bar is moved into the locked position.

60. The undercarriage as defined in claim 48, wherein said push bar including a base section and a middle section, said base section connected to said middle section at an angle of about  $15^{\circ}$  -  $90^{\circ}$ .

61. The undercarriage as defined in claim 48, including a lift bar secured to said push bar.

71. The undercarriage as defined in claim 1, wherein said center of gravity of the welder and/or power supply lies on or between said axles when the welder and/or power supply is a non-tilted portion on a generally flat ground surface and when the welder and/or power supply is in a tilted position on a generally flat ground surface.

72. The undercarriage as defined in claim 2, wherein said center of gravity of the welder and/or power supply lies on or between said axles when the welder and/or power supply is a non-tilted portion on a generally flat ground surface and when the welder and/or power supply is in a tilted position on a generally flat ground surface.

73. The undercarriage as defined in claim 48, wherein said center of gravity of the welder or power supply lies on or between said axes when the welder or power supply is a non-tilted portion on a generally flat ground surface and when the welder or power supply is in a tilted position on a generally flat ground surface.

74. A moveable undercarriage for supporting and moving a welder or a power supply over a ground surface comprising a base structure, at least one front wheel rotatably secured to said base, at least one rear wheel rotatable secured to said base, and a push bar secured to said base, said rear wheel having a radius that is equal to or greater than a radius of said front wheel, said at least one  
5 front wheel and said at least one rear wheel rotating about axles positioned on said base which are spaced apart along the longitudinal axis of said base so that the spacing is less than about 2 times the sum of the radii of said front and rear wheels.

75. The undercarriage as defined in claim 74, wherein the spacing between said front and rear axles is between about 1.0-1.5 times the sum of the radii of said front and rear wheels.

82. The undercarriage as defined in claim 74, wherein said front and rear axles positioned

on said base such that a center of gravity of the welder or power supply lies on or between said axles  
when the welder or power supply is in a non-tilted position on a generally flat ground surface and  
when the welder or power supply is in a tilted position on a generally flat ground surface.